

**UNITED STATES DEPARTMENT OF COMMERCE****United States Patent and Trademark Office**Address: COMMISSIONER OF PATENTS AND TRADEMARKS
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/517,426 03/02/00 MARIA

V 5475.00

DORSEY & WHITNEY LLP
1001 PENNSYLVANIA AVENUE NW
SUITE 300 SOUTH
WASHINGTON DC 20004

PM82/0426

EXAMINER

MILLER, E

ART UNIT

PAPER NUMBER

3641

DATE MAILED:

04/26/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

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Office Action Summary

Application No.

09/517,426

Applicant(s)

MARIA ET AL.

Examiner

Edward A. Miller

Art Unit

3641

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 8-27 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 8-27 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claims ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 18) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____

Art Unit: 3641

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1, 2 and 8-27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims provide for the use or production of materials by crystallization, but, since the claims do not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced. This applies to claim 1, but also to independent claims 9, 14, and 18, which recite a process for the production of materials with improved properties, but without any process step, and the preamble is followed by a number of “wherein” clauses, but which appear to modify by reciting additional properties when there are no method steps in the first instance.

Further, the claims throughout recite limitations without adequate, indeed if any, antecedent basis. For example, see in claim 1, line 3, “the energetic materials” [also claims 9, 14 and 18, which at best mistake the product for the starting material], line 4, “ultrasonic vibration”; claim 2, bridging lines 1-2 “the crystallizing mixture” (also in claim 8, line 1), and line 2, “crystallization”; claim 9, line 2, “the crystallizing mixture”, line 5, “the zone”; claims 10-12, line 1 “recrystallization” and “the temperature”; and so on throughout all the claims.

Claims are also incomplete for omitting essential steps, such omission amounting to a gap between the steps. There are no basic method steps of dissolution, providing materials, crystallizing (in the presence of ultrasonic energy?), etc. See MPEP § 2172.01. Further, in claims 23-27, it is not perfectly clear what the various acronyms refer to, or where the basis for such is found in the

Art Unit: 3641

specification, e.g., if the specification is being relied upon for explaining the terms. In claims 19-22, as well as all the claims generally, it is not clear what applicants intends for the starting materials or products. In all the claims, if the starting material is identical to the product, then all the claims are drawn to useless processes which accomplish nothing. For example, C-4 is one well known explosive. However, if it is dissolved via some hypothetical process, subjected to ultrasonic energy and precipitated, it would appear that the components of the explosive composition would differentially precipitate. As to such, the product would be different from the starting material, as opposed to being merely a purified form of the same starting compound, if such is intended. The claims should be rewritten throughout. These are exemplary, only.

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 1, 2 and 8-27, as best understood, are rejected under 35 U.S.C. 101 because the claimed recitation of a use, e.g., "process for the production" without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Further, the claims read on a process that goes through some method or procedure, which ends up with the precise starting material. Such a process fails to comply with the statutory requirement that the process be useful.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary

Art Unit: 3641

skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 2 and 8-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Subramanian et al. in view of Mangum et al., and Somoza et al. I and II.

Subramanian et al. teach the basic invention, in one possibility of what it may be understood to require. Therein, as in the Abstract, precipitation is performed to form small crystals with the benefit of ultrasonic waves. Ultrasonic background is given from about col. 3, line 37- col. 4, line 39, with further detail at col. 5, line 61- col. 6, line 36. Col. 4, lines 52-62, and col. 17, lines 48-56, make it clear that the invention method is useful to make small size crystals of explosive ingredients. Further detail is taught throughout, including in Example 12, with specific ultrasonic detail. In view of Mangum et al., and Somoza et al. I and II, it would have further been obvious to prepare specific notoriously well known explosive ingredients by such a crystallization process. In Mangum et al., col. 3, lines 30-45, ammonium perchlorate is crystallized in small sizes with ultrasonic energy, with variation of process parameters to vary the results. In Somoza et al. I, col. 2, lines 8-49, use of ultrasonic energy during grinding is helpful to remove impurities from crystal surfaces to produce an improved product, and in Somoza et al. II, the Abstract, e.g., teaches that small size particles are less sensitive. Thus, it is perfectly clear that these processes will produce a beneficial product with small size, improved purity and reduced sensitivity. Variation of specific notoriously well known ingredients, or variation of well known parameters would have been obvious for the expected reasons taught in the references. It is well settled that optimizing a result effective variable is well within the expected ability of a person or ordinary skill in the subject art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980), *In re Aller*, 220 F.2d 454, 105 USPQ 233 (CCPA 1955).

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Art Unit: 3641

8. Any inquiry concerning either this or an earlier communication from the Examiner should be directed to Examiner Edward A. Miller at (703) 306-4163. Examiner Miller may normally be reached daily, except alternate Fridays, from about 9:30 AM to 7 PM.

If attempts to reach Examiner Miller by telephone are unsuccessful, his supervisor Mr. Carone can be reached at (703) 306-4198. The Group fax number is (703) 305-7687.

If there is no answer, or for any inquiry of a general nature or relating to the application status, please call the Group receptionist at (703) 308-1113.

Miller/em
April 22, 2001

A handwritten signature in black ink, appearing to read 'E. Miller', with a stylized flourish at the end.

**EDWARD A. MILLER
PRIMARY EXAMINER**